

08/28/14

# MitkPython

# MitkPython - Build

- Provides VTK/SimpleITK/OpenCV python wrapping
- Enable MITKPython:

```
MITK_USE_Python:BOOL=ON
```

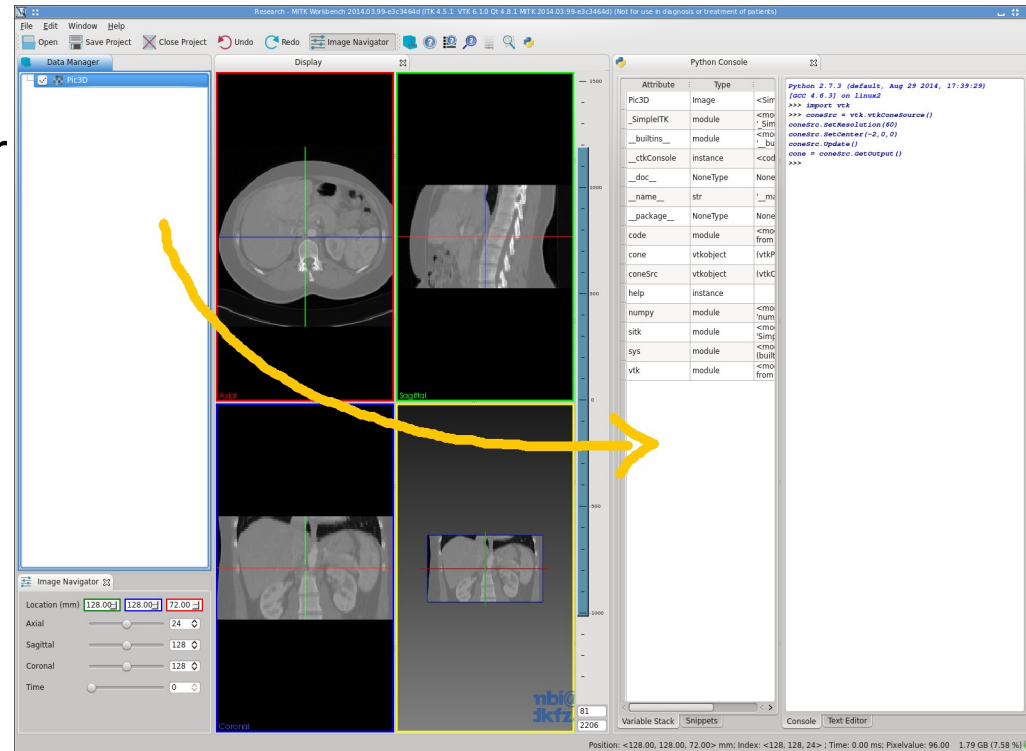
- Use own Python runtime:

```
MITK_USE_SYSTEM_PYTHON:BOOL=ON
```

Note: Python runtime must include Numpy

# MitkPython - Usage

- Drag & Drop Images and surfaces from the DataManager into the VariableStack to transfer them to python
- Data objects are available as global variables in Python
- Double click on the entry in the VariableStack to transfer objects to the DataManager
- Code can be run in the console
- Scripts can be loaded from files
- Example Snippets



- Image:
  - Images are copied in-memory as SimpleITK images
  - 2D Images can be copied as OpenCV images
- Surface:
  - Surfaces are fully memory mapped via the VTK python wrapping

- SimpleITK:

```
import SimpleITK as sitk
filter = sitk.MedianImageFilter()
filter.SetRadius(1)
outImg = filter.Execute(img)
```

- VTK:

```
import vtk
coneSrc = vtk.vtkConeSource()
coneSrc.SetResolution(60)
coneSrc.SetCenter(-2,0,0)
coneSrc.Update()
cone = coneSrc.GetOutput()
```

# Questions?